

H-A

02/08/0110

#6

Page 1 of 7

0280

0460

0124 OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001
TIME: 12:35:21

Input Set : A:\LEX122 SEQLIST.txt
Output Set: N:\CRF3\02082001\I770643.raw

0300

Central

5/17/01 Files

4 <110> APPLICANT: LEXICON GENETICS INCORPORATED
6 <120> TITLE OF INVENTION: Novel Human Neurexin-like Proteins and Polynucleotides Encoding the
7 Same
9 <130> FILE REFERENCE: LEX-0122-PCT
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/770,643
C--> 11 <141> CURRENT FILING DATE: 2001-01-26
11 <150> PRIOR APPLICATION NUMBER: US 60/178,557
12 <151> PRIOR FILING DATE: 2000-01-26
14 <150> PRIOR APPLICATION NUMBER: US 60/199,513
15 <151> PRIOR FILING DATE: 2000-04-25
17 <160> NUMBER OF SEQ ID NOS: 27
19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 3924
23 <212> TYPE: DNA
24 <213> ORGANISM: homo sapiens
26 <400> SEQUENCE: 1
27 atggattctt taccacggct gaccagcgtt ttgactttgc tgttctctgg cttgtggcat 60
28 ttaggattaa cagcgacaaa ctacaactgt gatgatccac tagcatccct gctctctcca 120
29 atggcttttt ccagttcctc agacctcact ggcactcaca gccagctca actcaactgg 180
30 agagttggaa ctggcggttg gtccccagca gattccaatg ctcaacagtg gctccagatg 240
31 gacctgggaa acagagtaga gattacagca gtggccacgc agggaagata cggaagctct 300
32 gactgggtga cgagttacag cctgatgttc agtgacacag gacgcaactg gaaacagtac 360
33 aaacaagaag acagcatctg gacctttgca ggaacatga atgctgacag cgtggtgcac 420
34 cacaagctat tgcactcagt gagagcccgga tttgttcgct ttgtgcccct ggaatggaat 480
35 cccagtggga agattggcat gagagtcgag gtctacggat gttcctataa atcagacgtt 540
36 gctgactttg atggccgaag ctcaacttctg tacaggttca atcagaagtt gatgagtact 600
37 ctcaaagatg tgatctccct gaagttcaag agcatgcaag gagatggggt cctgttccat 660
38 ggagaaggtc agcgtggaga ccacatcacc ttggaactcc agaaggggag gctcgcccta 720
39 cacctcaatt tgggtgacag caaagcgcgg ctacgcagca gcttgccctc tgccaccctg 780
40 ggcagcctcc tggatgacca gcaactggcac tyggtcctca ttgagcgggt gggcaagcag 840
41 gtgaacttca cgggtggaaa gcacacacag cacttccgca ccaagggcga gacggatgcc 900
42 ttagacattg actatgagct tagttttgga ggaattccag taccaggaaa acctgggacc 960
43 ttttttaaaga aaaacttcca tggatgcac gaaaaccttt actacaatgg agtaaacata 1020
44 attracctgg ctaagagacg aaagcatcag atctatactg tgggcaatgt cactttttcc 1080
45 tgctccgaac cacagattgt gccatcaca tttgtyaact ccagcggcag ctatttgctg 1140
46 ctgcccggca cccccaaat tgatgggctc tcagtgaatt tccagtttcg aacatggaac 1200
47 aaggatggtc tgcttctgtc cacagagctg tctgagggct cgggaaccct gctgctgagc 1260
48 ctggaggggt gaatcctgag actcgtgatt cagaaaatga cagaacgcgt agctgaaatc 1320
49 ctcacaggca gcaacttgaa tgatggcctg tggcactcgg ttagcatcaa cgccaggagg 1380
50 aaccgcatca cgtcactct ggatgatgaa gcagcaccce cggctccaga cagcacttgg 1440
51 gtgcagattt attctggaaa tagctactat tttggagggt gccccgaca tctcaccgat 1500
52 tcccaatgtt taaatcccat taaggctttc caaggctgca tgaggctcat ctttattgat 1560
53 aaccagccca aggacctcat ttcagttcag caaggttccc tggggaattt tagtgattta 1620
54 cacattgatc tgtgtagcat caaagacagg tgtttgcaa actactgtga acatggagga 1680
55 agctgctccc agtctctggac taccttctat tgtaactgca gtgacacaag ttacactggt 1740
56 gccacctgcc acaactccat ctacgagcaa tctctcgagg tgtacaggca ccagggggaat 1800

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001

TIME: 12:35:21

Input Set : A:\LEX122 SEQLIST.txt

Output Set: N:\CRF3\02082001\I770643.raw

```

57 acagccggct tcttctacat cgactcagat ggcagcggcc cactgggacc tctccaggtg 1860
58 tactgcaata tcactgagga caagatctgg acatcagtgc agcacaacaa tacagagctg 1920
59 acccgagtgc ggggcgctaa ccttgagaag ccctatgcca tggccttgga ctacgggggc 1980
60 agcatggaac agctggagggc cgtgatcgac ggctctgagc actgtgagca ggaggtggcc 2040
61 taccactgca ggaggtcccg cctgctcaac acgccggatg gaacaccatt tacctggtgg 2100
62 attgggcggt ccaatgaaag gcacccttac tggggagggt cccctcctgg ggtccagcag 2160
63 tgtgagtgtg gcctagacga gagctgcctg gacattcagc acttttgcaa ttgcgacgct 2220
64 gacaaggatg aatggacaaa tgatactggc tttctttcct tcaaagacca cttgcctgtc 2280
65 actcagatag ttatcactga taccgacaga tcaaactcag aagccgcttg gagaattggt 2340
66 cccttgcggt gctatggtga ccgacgcttc tggaaacgcc tctcatttta tacagaagcc 2400
67 tcttacctcc actttcctac cttccatgcg gaattcagtg ccgatatttc cttctttttt 2460
68 aaaaccacag cattatccgg agttttccta gaaaatcttg gcattaaaga cttcattcga 2520
69 ctcgaaataa gctctccttc agagatcacc tttgccatcg atgttgggaa tggtcctgtg 2580
70 gagcttgtag tccagtctcc ttctcttctg aatgacaacc aatggcacta tgtccgggct 2640
71 gagaggaacc tcaaggagac ctccctgcag gtggacaacc ttccaaggag caccagggag 2700
72 acgtcggagg agggccattt tcgactgcag ctgaacagcc agttgtttgt agggggaacg 2760
73 tcatccagac agaaaggctt cctaggatgc attcgtcctt tacacttgaa tggacagaaa 2820
74 atggacctgg aagagagggc aaaggtcaca tctggagtca ggccaggctg ccccgccac 2880
75 tgcagcagct acggcagcat ctgccacaac gggggcaagt gtgtggagaa gcacaatggc 2940
76 tacctgtgtg attgcaccaa ttcaccttat gaagggccct tttgcaaaaa agaggtttct 3000
77 gctgtttttg aggctggcac gtcggttact tacatgtttc aagaacctta tcctgtgacc 3060
78 aagaatataa gcctctcctc ctcagctatt tacacagatt cagctccatc caaggaaaac 3120
79 attgcactta gctttgtgac aaccacagga cccagctctt tgctctttat caattcttct 3180
80 tctcaggact tcgtggttgt tctgctctgc aagaatggaa gcttacaggt tcgctatcac 3240
81 ctaaacaagg aagaaaccca tgtattcacc attgatgcag ataactttgc taacagaagg 3300
82 atgcaccact tgaagattaa ccgagagggg agagagctta ccattcagat ggaccagcaa 3360
83 cttcgactca gttataactt ctctccggaa gtagagttca gggttataag gtcactcacc 3420
84 ttgggcaaag tcacagagaa tcttggtttg gattctgaag ttgctaaagc aaatgccatg 3480
85 ggttttgctg gatgcattgc ttccgtccag tacaaccaca tagcaccact gaaggctgcc 3540
86 ctgcgccatg ccactgtcgc gcctgtgact gtccatggga ccttgacgga atccagctgt 3600
87 ggcttcatgg tggactcaga tgtgaatgca gtgaccacgg tgcattcttc atcagatcct 3660
88 tttgggaaga cagatgagcg ggaaccactc acaaatgctg ttogaagtga ttcggcagtc 3720
89 atcggagggg tgatagcagt ggtgatattc atcatcttct gtatcatcgg catcatgacc 3780
90 cggttcctct accagcacia gcagtcacat cgtacgagcc agatgaagga gaaggaatat 3840
91 ccagaaaatt tggacagttc cttcagaaat gaaattgact tgcaaaacac agtgagcgag 3900
92 tgtaaacggg aatatttcat ctga 3924

```

94 <210> SEQ ID NO: 2

95 <211> LENGTH: 1307

96 <212> TYPE: PRT

97 <213> ORGANISM: homo sapiens

99 <220> FEATURE:

100 <221> NAME/KEY: VARIANT

101 <222> LOCATION: (1)...(1307)

102 <223> OTHER INFORMATION: Xaa = Any Amino Acid

104 <400> SEQUENCE: 2

105 Met Asp Ser Leu Pro Arg Leu Thr Ser Val Leu Thr Leu Leu Phe Ser

106 1 5 10 15

107 Gly Leu Trp His Leu Gly Leu Thr Ala Thr Asn Tyr Asn Cys Asp Asp

108 20 25 30

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001

TIME: 12:35:21

Input Set : A:\LEX122 SEQLIST.txt

Output Set: N:\CRF3\02082001\I770643.raw

```

109 Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
110      35      40      45
111 Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
112      50      55      60
113 Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
114 65      70      75      80
115 Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
116      85      90      95
117 Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
118      100     105     110
119 Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
120      115     120     125
121 Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
122      130     135     140
123 His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
124 145     150     155     160
125 Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
126      165     170     175
127 Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
128      180     185     190
129 Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
130      195     200     205
131 Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
132      210     215     220
133 Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
134 225     230     235     240
135 His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
136      245     250     255
W--> 137 Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
138      260     265     270
139 Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His
140      275     280     285
141 Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
142      290     295     300
143 Tyr Glu Leu Ser Phe Gly Gly Ile Pro Val Pro Gly Lys Pro Gly Thr
144 305     310     315     320
145 Phe Leu Lys Lys Asn Phe His Gly Cys Ile Glu Asn Leu Tyr Tyr Asn
146      325     330     335
W--> 147 Gly Val Asn Ile Ile Xaa Leu Ala Lys Arg Arg Lys His Gln Ile Tyr
148      340     345     350
149 Thr Val Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
150      355     360     365
151 Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Leu Pro Gly Thr
152      370     375     380
153 Pro Gln Ile Asp Gly Leu Ser Val Ser Phe Gln Phe Arg Thr Trp Asn
154 385     390     395     400
155 Lys Asp Gly Leu Leu Leu Ser Thr Glu Leu Ser Glu Gly Ser Gly Thr
156      405     410     415
157 Leu Leu Leu Ser Leu Glu Gly Gly Ile Leu Arg Leu Val Ile Gln Lys

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001

TIME: 12:35:21

Input Set : A:\LEX122 SEQLIST.txt

Output Set: N:\CRF3\02082001\I770643.raw

158			420				425			430						
159	Met	Thr	Glu	Arg	Val	Ala	Glu	Ile	Leu	Thr	Gly	Ser	Asn	Leu	Asn	Asp
160			435				440					445				
161	Gly	Leu	Trp	His	Ser	Val	Ser	Ile	Asn	Ala	Arg	Arg	Asn	Arg	Ile	Thr
162		450					455					460				
163	Leu	Thr	Leu	Asp	Asp	Glu	Ala	Ala	Pro	Pro	Ala	Pro	Asp	Ser	Thr	Trp
164	465					470					475					480
165	Val	Gln	Ile	Tyr	Ser	Gly	Asn	Ser	Tyr	Tyr	Phe	Gly	Gly	Cys	Pro	Asp
166				485					490					495		
167	Asn	Leu	Thr	Asp	Ser	Gln	Cys	Leu	Asn	Pro	Ile	Lys	Ala	Phe	Gln	Gly
168			500					505					510			
169	Cys	Met	Arg	Leu	Ile	Phe	Ile	Asp	Asn	Gln	Pro	Lys	Asp	Leu	Ile	Ser
170			515					520					525			
171	Val	Gln	Gln	Gly	Ser	Leu	Gly	Asn	Phe	Ser	Asp	Leu	His	Ile	Asp	Leu
172		530					535					540				
173	Cys	Ser	Ile	Lys	Asp	Arg	Cys	Leu	Pro	Asn	Tyr	Cys	Glu	His	Gly	Gly
174	545					550					555					560
175	Ser	Cys	Ser	Gln	Ser	Trp	Thr	Thr	Phe	Tyr	Cys	Asn	Cys	Ser	Asp	Thr
176				565					570					575		
177	Ser	Tyr	Thr	Gly	Ala	Thr	Cys	His	Asn	Ser	Ile	Tyr	Glu	Gln	Ser	Cys
178			580					585					590			
179	Glu	Val	Tyr	Arg	His	Gln	Gly	Asn	Thr	Ala	Gly	Phe	Phe	Tyr	Ile	Asp
180			595				600					605				
181	Ser	Asp	Gly	Ser	Gly	Pro	Leu	Gly	Pro	Leu	Gln	Val	Tyr	Cys	Asn	Ile
182		610				615					620					
183	Thr	Glu	Asp	Lys	Ile	Trp	Thr	Ser	Val	Gln	His	Asn	Asn	Thr	Glu	Leu
184	625					630					635					640
185	Thr	Arg	Val	Arg	Gly	Ala	Asn	Pro	Glu	Lys	Pro	Tyr	Ala	Met	Ala	Leu
186				645					650					655		
187	Asp	Tyr	Gly	Gly	Ser	Met	Glu	Gln	Leu	Glu	Ala	Val	Ile	Asp	Gly	Ser
188			660					665					670			
189	Glu	His	Cys	Glu	Gln	Glu	Val	Ala	Tyr	His	Cys	Arg	Arg	Ser	Arg	Leu
190			675					680				685				
191	Leu	Asn	Thr	Pro	Asp	Gly	Thr	Pro	Phe	Thr	Trp	Trp	Ile	Gly	Arg	Ser
192		690				695					700					
193	Asn	Glu	Arg	His	Pro	Tyr	Trp	Gly	Gly	Ser	Pro	Pro	Gly	Val	Gln	Gln
194	705					710					715					720
195	Cys	Glu	Cys	Gly	Leu	Asp	Glu	Ser	Cys	Leu	Asp	Ile	Gln	His	Phe	Cys
196				725					730				735			
197	Asn	Cys	Asp	Ala	Asp	Lys	Asp	Glu	Trp	Thr	Asn	Asp	Thr	Gly	Phe	Leu
198				740					745				750			
199	Ser	Phe	Lys	Asp	His	Leu	Pro	Val	Thr	Gln	Ile	Val	Ile	Thr	Asp	Thr
200			755					760					765			
201	Asp	Arg	Ser	Asn	Ser	Glu	Ala	Ala	Trp	Arg	Ile	Gly	Pro	Leu	Arg	Cys
202		770				775						780				
203	Tyr	Gly	Asp	Arg	Arg	Phe	Trp	Asn	Ala	Val	Ser	Phe	Tyr	Thr	Glu	Ala
204	785					790					795					800
205	Ser	Tyr	Leu	His	Phe	Pro	Thr	Phe	His	Ala	Glu	Phe	Ser	Ala	Asp	Ile
206				805					810					815		

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001
 TIME: 12:35:21

Input Set : A:\LEX122 SEQLIST.txt
 Output Set: N:\CRF3\02082001\I770643.raw

```

207 Ser Phe Phe Phe Lys Thr Thr Ala Leu Ser Gly Val Phe Leu Glu Asn
208      820      825      830
209 Leu Gly Ile Lys Asp Phe Ile Arg Leu Glu Ile Ser Ser Pro Ser Glu
210      835      840      845
211 Ile Thr Phe Ala Ile Asp Val Gly Asn Gly Pro Val Glu Leu Val Val
212      850      855      860
213 Gln Ser Pro Ser Leu Leu Asn Asp Asn Gln Trp His Tyr Val Arg Ala
214 865      870      875      880
215 Glu Arg Asn Leu Lys Glu Thr Ser Leu Gln Val Asp Asn Leu Pro Arg
216      885      890      895
217 Ser Thr Arg Glu Thr Ser Glu Glu Gly His Phe Arg Leu Gln Leu Asn
218      900      905      910
219 Ser Gln Leu Phe Val Gly Gly Thr Ser Ser Arg Gln Lys Gly Phe Leu
220      915      920      925
221 Gly Cys Ile Arg Ser Leu His Leu Asn Gly Gln Lys Met Asp Leu Glu
222      930      935      940
223 Glu Arg Ala Lys Val Thr Ser Gly Val Arg Pro Gly Cys Pro Gly His
224 945      950      955      960
225 Cys Ser Ser Tyr Gly Ser Ile Cys His Asn Gly Gly Lys Cys Val Glu
226      965      970      975
227 Lys His Asn Gly Tyr Leu Cys Asp Cys Thr Asn Ser Pro Tyr Glu Gly
228      980      985      990
229 Pro Phe Cys Lys Lys Glu Val Ser Ala Val Phe Glu Ala Gly Thr Ser
230      995      1000      1005
231 Val Thr Tyr Met Phe Gln Glu Pro Tyr Pro Val Thr Lys Asn Ile Ser
232      1010      1015      1020
233 Leu Ser Ser Ser Ala Ile Tyr Thr Asp Ser Ala Pro Ser Lys Glu Asn
234 1025      1030      1035      1040
235 Ile Ala Leu Ser Phe Val Thr Thr Gln Ala Pro Ser Leu Leu Leu Phe
236      1045      1050      1055
237 Ile Asn Ser Ser Ser Gln Asp Phe Val Val Val Leu Leu Cys Lys Asn
238      1060      1065      1070
239 Gly Ser Leu Gln Val Arg Tyr His Leu Asn Lys Glu Glu Thr His Val
240      1075      1080      1085
241 Phe Thr Ile Asp Ala Asp Asn Phe Ala Asn Arg Arg Met His His Leu
242      1090      1095      1100
243 Lys Ile Asn Arg Glu Gly Arg Glu Leu Thr Ile Gln Met Asp Gln Gln
244 1105      1110      1115      1120
245 Leu Arg Leu Ser Tyr Asn Phe Ser Pro Glu Val Glu Phe Arg Val Ile
246      1125      1130      1135
247 Arg Ser Leu Thr Leu Gly Lys Val Thr Glu Asn Leu Gly Leu Asp Ser
248      1140      1145      1150
249 Glu Val Ala Lys Ala Asn Ala Met Gly Phe Ala Gly Cys Met Ser Ser
250      1155      1160      1165
251 Val Gln Tyr Asn His Ile Ala Pro Leu Lys Ala Ala Leu Arg His Ala
252      1170      1175      1180
253 Thr Val Ala Pro Val Thr Val His Gly Thr Leu Thr Glu Ser Ser Cys
254 1185      1190      1195      1200
255 Gly Phe Met Val Asp Ser Asp Val Asn Ala Val Thr Thr Val His Ser

```

FT:

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/770,643

DATE: 02/08/2001
TIME: 12:35:22

Input Set : A:\LEX122 SEQLIST.txt
Output Set: N:\CRF3\02082001\I770643.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:740 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:860 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:1133 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1282 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1447 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22